

EPA Analysis and Model Testing for Retail Spaces

Overview

The Environmental Protection Agency has been working to expand the national Energy Performance Rating system to retail buildings based on the Department of Energy's Energy Information Administration 2003 Commercial Buildings Energy Consumption Survey (CBECS). EPA is looking to collaborate with leading retailers to help determine the appropriate applicability of the rating and we are requesting that you participate in this critical effort.

For the first time, the proposed energy performance rating will allow retail stores to be compared with others nationwide. The rating will express energy performance on a scale of 1-to-100, with ratings of 75 or higher eligible to earn the ENERGY STAR designation. An energy rating for retail establishments has been long anticipated and will help owners and/or managers assess the energy performance of their buildings, make more informed budget, investment and management decisions and help ENERGY STAR partners publicize their energy efficiency achievements. The rating may be appropriate for the following types of retail buildings: drugstores, discount stores, department stores (anchor or non-mall), home centers/hardware stores, and other retail facilities.

During the past few months, EPA has performed a detailed investigation of the 2003 CBECS data to identify the significant drivers of energy use in retail buildings. These variables are included in an initial model whose purpose is to standardize energy use in retail stores allowing for objective comparisons across different types and locations of retail establishments. To evaluate this new energy performance rating, EPA is eager to work with you to collect energy data and usage characteristics from your stores. The additional data review will be used to learn more about energy use in retail buildings and will enable EPA to test the working model and define the rating's applicability across the retail market. In all, we are requesting data from approximately 20 different retail companies to test across a range of store types and business models.

Request

EPA requests energy use for all fuels, including electricity, gas, and any other fuels used, and operational data from a random sample of your stores for the calendar year 2005. Each participating organization should select a random sample of 50-100 of their facilities. These facilities must be stand alone establishments or establishments located in a strip center. They cannot be facilities located within enclosed malls unless they are anchor department stores.

The attached list outlines the energy and operational data that will be required to test the working model. It would be most helpful if you could be as comprehensive as possible in providing this information. For your benefit we have also included a worksheet template as an example of a simple and straightforward way to provide us with the data. If you currently manage utility bills through a third-party provider, we can coordinate with that provider to transfer these energy data, however the building characteristic data will likely need to come through you or individual properties. In order to expedite the testing, we hope you can provide this information as soon as possible. The deadline for this request is December 15, 2006. If you have questions while completing this request please contact Brian Carroll of ICF International at, bcarroll@icfi.com or Sara Lisauskas of ICF International at slisauskas@icfi.com.

Confidentiality

All Data will be kept strictly confidential; no information about your organization will be shared with any of the other participating companies. If you have any questions or concerns about how the data will be reviewed, please contact Brian Carroll of ICF International at bcarroll@icfi.com or Sara Lisauskas of ICF International at slisauskas@icfi.com.

Results

EPA will analyze the data you provide in order to test and refine the working energy performance rating for retail stores. Based on this evaluation and the final form of the rating, EPA will provide each participating organization with a summary of the statistics for their facilities, and relative performance rankings within the organization so that they can understand how energy use compares among their facilities.

EPA will also solicit your feedback regarding how your facilities rate using the new model. Based on your unique knowledge of how your facilities are managed and operated, you are in the position to provide a valuable assessment of the applicability of the energy rating.

Finally, EPA will convene a web conference in early 2007 to share aggregate results, general statistics and trends. We will provide final recommendations for a national energy performance rating for retail stores with all participating organizations.

Data Request Details

Your participation in this process is critical to the success of a new rating for retail stores. This summary form is designed to help you understand the required data. Please note that we are collecting this large amount of data, for comparison with information in the CBECS survey conducted by the Energy Information Administration. We will use this information to determine the key drivers of energy use. Once the retail rating is built into Portfolio Manager, we will **not** require this level of detail.

Data Collection Guidelines

- Select 50 – 100 establishments by a random sampling procedure (such as with a random number generator)
- Do not include any establishments in enclosed malls in your sample, unless they are anchor department stores
- Report values that were valid for the 2005 calendar year
- If you have any specific questions about the items listed below, or difficulty assessing data for the 2005 calendar year, please contact Brian Carroll at bcarroll@icfi.com or Sara Lisauskas at slisauskas@icfi.com

Variable List

The following table outlines the variables of interest; each section of the table corresponds to a tab in the MS Excel Data Template. ***That data template was created for your convenience, but we will accept the data in any form, provided all of the listed information is included.***

Variable Name	Description/Question
Tab 1 – Building Specifications	
Store Name or ID	Please provide a unique name (or number) for each store in your sample.
Zip code	NA
Square footage	What is the gross or total square footage of all the space in this building, both finished and unfinished, including basements, hallways, lobbies, stairways, elevator shafts and indoor parking levels?
Number of floors	How many floors are in the tallest section of the building, including basements, parking levels, or any other floors below ground level, but excluding half-floors, mezzanines, balconies, and lofts?
Type of building	Please select among the following: 1 = Free-standing, 2 = Establishment in strip mall, 3 = Anchor department store in enclosed mall
Type of store	Please select among the following: 1 = Discount Store, 2 = Drugstore, 3 = Home center/hardware, 4 = Department store, 5 = Other type of store
Tab 2 – Building Operations	
Months in use	During 2005, for how many months was this building in use?
Weekly operating hours	How many total hours per week is the building normally open? Include hours that the store is open for business, not hours for stocking shelves.
Number of employees	How many employees work in the building during the main shift, that is, when most employees are present?
Electricity used	Yes or no?
Natural Gas used	Yes or no?
Fuel oil/diesel/kerosene used	Yes or no?

Bottled gas/LPG/propane used	Yes or no?
Other energy sources used	Yes or no? If yes, please specify the type of energy (i.e. district heat, district steam, coal, wood, on-site solar panels)
Percent heated	What percentage of the square footage in this building was heated to at least 50 degrees Fahrenheit in 2005, including basements and enclosed garages if they were heated to at least 50 degrees?
Percent cooled	What percentage of the square footage in this building was cooled by air conditioning equipment in 2005?
Outdoor parking lot lighting	Does the electricity use reported for this building include electricity used to light an exterior parking area?
Tab 3 – Building Activity	
Commercial food preparation area	Is any space used for institutional or commercial food preparation and serving, such as kitchens, restaurants, snack bars, cafeterias, steam tables, or warming areas? Yes or no? Do not include lounge areas with only a microwave or other small food preparation equipment or vending machines.
Walk-in refrigeration	How many walk-in refrigeration or freezer units are there?
Open case refrigeration	How many open refrigeration or freezer cases or cabinets are there? Each section (usually 4-12 feet) can be considered one case.
Closed case refrigeration	How many closed refrigeration or freezer cases or cabinets are there? Please include small beverage coolers in this count.
Residential-type refrigeration	How many residential-type refrigerators or freezers are there?
Refrigerated vending machines	How many refrigerated vending machines are there inside the building? You should include vending machines outside the building if they are captured on the main energy meter.
Number of servers	How many dedicated servers are used in this building?
Number of computers	How many computers are used in this building?
Number of printers	How many printers are there in this building?
Number of cash registers	How many cash registers are used in this building?
Number of copiers	How many photocopiers are used in this building?
Tabs 4-6 – Energy Data	
For each fuel, provide the annual energy consumption for 2005. You can provide this as one value for the year or as a series of meter/energy bill entries that cover the entire calendar year.	
Meter ID	Enter a distinguishing name or number for each meter
Start Date	For each energy use value, enter a start and end date. You can provide an entry for each bill or one entry for the entire year.
End Date	
Energy Consumption	Enter the energy consumption corresponding to the start and end date.
Energy Units	Please enter the corresponding units for the energy consumption figure. (i.e. KWh, therms, gallons, KBtu)